



PTO/SB/08A (10-01)

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Substitute Form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 3

Complete if Known	
Application Number	10/797,155
Filing Date	March 11, 2004
First Named Inventor	JoeBen Bevirt
Art Unit	2631 377F3711
Examiner Name	Unassigned Fernstrom
Attorney Docket Number	IMMR081/02US

U.S. PATENT DOCUMENTS

Examiner	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ³ (# known)			
JK		6,422,941		7/23/2002	Thorner et al.	
		6,160,489		12/12/2000	Perry et al.	
		6,111,577		8/29/2000	Zilles et al.	
		5,690,582		11/25/1997	Ulrich et al.	
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		5,437,607		8/1/1995	Taylor	
		5,436,622		7/25/1995	Gutman et al.	
		5,283,970		2/8/1994	Aigner	
		5,186,695		2/16/1993	Mangseth et al.	
		5,175,459		12/29/1992	Danial et al.	
		5,165,897		11/24/1992	Johnson	
		5,022,384		6/11/1991	Freels	
		4,885,565		12/5/1989	Embach	
		4,484,191		11/20/1984	Vavra	
		4,464,117		8/7/1984	Foerst	
		4,333,070		6/1/1982	Barnes	
		4,262,549		4/21/1981	Schwellenbach	
		4,127,752		11/28/1978	Lowthorp	
		2,972,140		2/14/1961	Hirsch	

Examiner Initials ²	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³	Number ⁴	Kind Code ⁵ (# known)			
JK		JP	H2-185278		7/19/1990	Taito Corporation	
		JP	H4-8381		1/13/1992	Epoch Co. and Key-Planning Co.	
		JP	H7-24147		1/27/1995	Sega Corporation	
		JP	H5-192449		8/3/1993	Taito Corporation	

Examiner Signature	<i>KF Fit</i>	Date Considered	12/19/05
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¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

² Applicant's unique citation designation number (optional). ³ Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. ⁴ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁵ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁷ Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/797,155
(use as many sheets as necessary)				Filing Date	March 11, 2004
Sheet	2	of	3	First Named Inventor	JoeBen Bevirt
				Art Unit	2691 371
				Examiner Name	Unassigned Fernstrom
				Attorney Docket Number	IMMR081/02US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
IC		PATRICK, "Design, Construction, and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments," <i>Master of Science Thesis</i> , MIT, Aug. 1990, archived Nov. 8, 1990.	
		CALDER, "Design of A Force-Feedback Touch-Introducing Actuator For Teleoperator Robot Control," <i>Bachelor of Science Thesis</i> , MIT, May 1983, archived June 23, 1983.	
		WIKER, "Teletouch Display Development: Phase 1 Report," <i>Technical Report</i> 1230, Naval Ocean Systems Center, San Diego, July 1988.	
		BLISS, "Optical-to-Tactile Image Conversion for the Blind," <i>IEEE Transactions on Man-Machine Systems</i> , Vol. MMS-11, No. 1, March 1970.	
		JOHNSON, "Shape-Memory Alloy Tactile Feedback Actuator," <i>Armstrong Aerospace Medical Research Laboratory</i> , AAMRL-TR-90-039, August, 1990.	
		KONTARINIS et al., "Tactile Display of Vibratory Information in Teleoperation and Virtual Environments," <i>PRESENCE</i> , 4(4):387-402, Harvard Univ., 1995.	
		AUKSTAKALNIS et al., "Silicon Mirage: The Art and Science of Virtual Reality," ISBN 0-938151-82-7, pp. 129-180, 1992.	
		EBERHARDT et al., "Inducing Dynamic Haptic Perception by The Hand: System Description and Some Results," <i>DSC-Vol. 55-1, Dynamic Systems and Control</i> . Volume 1, ASME 1994.	
		GOBEL et al., "Tactile Feedback Applied to Computer Mice," <i>International Journal of Human-Computer Interaction</i> , Vol. 7, No. 1, pp. 1-24, 1995.	
		PIMENTEL et al., "Virtual Reality: through the new looking glass," 2 nd Edition; McGraw-Hill, ISBN 0-07-050167-X, pp. 41-202, 1994.	
		"Cyberman Technical Specification," <i>Logitech Cyberman SWIFT Supplement to Logitech Mouse Technical Reference and Programming Guide</i> , 4/5/1994.	
		OEHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and Its Use in the Virtual Reality Environment," <i>Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95</i> , Seoul, Korea, 21-24 August 1995.	
		KACZMAREK et al., "Tactile Displays," <i>Virtual Environment Technologies</i> , Chap. 9, pp. 349-414.	
		LAKE, "Cyberman from Logitech," at http://www.ibiblio.org/GameBytes/Issue21/greviews/cyberman.html , 1994.	
↓		"Component Maintenance Manual With Illustrated Parts List, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 28 January 2002 (3 pages).	

Examiner Signature	<i>ICt Fct</i>	Date Considered	12/19/05
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				Filing Date	March 11, 2004
				First Named Inventor	JoeBen Bevirt
				Art Unit	2631-3711
				Examiner Name	Unassigned <i>Fernstrom</i>
				Attorney Docket Number	IMMR081/02US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS		
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
<i>RC</i>		"Technical Manual Overhaul Instructions With Parts Breakdown, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 15 July 1980 (23 pages).
<i>↓</i>		SCANNELL, "Taking a Joystick Ride," <i>Computer Currents</i> , Boston Edition, Vol. 9, No. 11, November 1994
<i>↓</i>		ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance In Telepresence Tasks," <i>Ph.D. Dissertation</i> , Stanford University, June 1994.

Examiner Signature	<i>Lat Lat</i>	Date Considered	<i>12/19/05</i>
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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
Sheet	1	of	8	Application Number	Unassigned 10/797/155
				Filing Date	Herewith 3/11/04
				First Named Inventor	JoeBen BEVIRT
				Group Art Unit	Unassigned 3711
				Examiner Name	Unassigned Ferguson
				Attorney Docket Number	IMMR-081/02US

PTO/SB/08A (08-00)

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code ² (if known)		
ICF	A1	6,323,837		Rosenberg	11/27/2001
	A2	6,246,390		Rosenberg	06/12/2001
	A3	6,193,519		Eggert et al.	02/2001
	A4	6,104,382		Martin et al.	08/15/2000
	A5	6,024,576		Bevirt et al.	02/2000
	A6	6,020,875		Moore et al.	02/01/2000
	A7	5,828,197		Martin et al.	10/27/1998
	A8	5,821,920		Rosenberg et al.	10/13/1998
	A9	5,816,105		Adelstein	10/06/1998
	A10	5,805,140		Rosenberg et al.	09/08/1998
	A11	5,790,108		Salcudean et al.	08/04/1998
	A12	5,785,630		Bobick, et al.	07/28/1998
	A13	5,769,640		Jacobus et al.	06/23/1998
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	A15	5,766,016		Sinclair et al.	06/16/1998
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	A17	5,742,278		Chen et al.	04/21/1998
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	A20	5,731,804		Rosenberg	03/1998
	A21	5,721,566		Rosenberg et al.	02/24/1998
	A22	5,694,013		Stewart et al.	12/02/1997
	A23	5,691,898		Rosenberg et al.	11/25/1997
	A24	5,666,473		Wallace	09/09/1997
	A25	5,666,138		Culver	09/09/1997
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	A27	5,643,087		Marcus et al.	07/01/1997
	A28	5,642,469		Hannaford et al.	06/24/1997
	A29	5,629,594		Jacobus et al.	05/13/1997
	A30	5,625,576		Masie et al.	04/29/1997
	A31	5,623,582		Rosenberg	04/22/1997
	A32	5,591,924		Hilton	01/01/1997
	A33	5,589,854		Tsai	12/31/1996
	A34	5,589,828		Armstrong	12/31/1996
	A35	5,587,937		Massie et al.	12/24/1996
	A36	5,576,727		Rosenberg et al.	11/19/1996
	A37	5,570,111		Barrett et al.	10/29/1996
	A38	5,551,701		Bouton et al.	09/03/1996
	A39	5,547,382		Yamasaki et al.	08/20/1996
	A40	5,513,100		Parker et al.	04/30/1996
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	A42	5,491,477		Clark et al.	02/13/1996
	A43	5,482,051		Reddy et al.	01/09/1996
	A44	5,466,213		Hogan et al.	11/14/1995

¹ Unique citation designation number.

² See attached Kinds of U.S. Patent Documents.

Examiner Signature	<i>Kit Fet</i>	Date Considered	12/19/05
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				Application Number	Unassigned 10/797,155
				Filing Date	Herewith 3/11/04
				First Named Inventor	JoeBen BEVIRT
				Group Art Unit	Unassigned 3711
				Examiner Name	Unassigned Fernstrom
Sheet	2	of	8	Attorney Docket Number	IMMR-081/02US

U.S. PATENT DOCUMENTS					
10F	A45	5,459,382		Jacobus et al.	10/17/1995
	A46	5,451,924		Massimino et al.	09/19/1995
	A47	5,445,166		Taylor	08/29/1995
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	A49	5,436,542		Petelin et al.	07/25/1995
	A50	5,429,140		Burdea et al.	07/04/1995
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	A54	5,405,152		Katanics et al.	04/11/1995
	A55	5,402,582		Raab	04/04/1995
	A56	5,397,323		Taylor et al.	03/14/1995
	A57	5,396,267		Bouton	03/07/1995
	A58	5,396,266		Brimhall	03/07/1995
	A59	5,389,865		Jacobus et al.	02/14/1995
	A60	5,379,663		Hara	01/10/1995
	A61	5,351,692		Dow et al.	10/04/1994
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	A71	5,243,266		Kasagami et al.	09/07/1993
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	A81	5,185,561		Good et al.	02/09/1993
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	A83	5,184,306		Erdman et al.	02/02/1993
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	A95	5,050,608		Watanabe et al.	09/24/1991
▼	A96	5,044,956		Behensky et al.	09/03/1991

Examiner Signature	Kat Felt	Date Considered	12/19/05
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				Group Art Unit	Unassigned 3711
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Sheet	3	of	8	Attorney Docket Number	IMMR-081/02US

U.S. PATENT DOCUMENTS					
	A97	5,040,306		McMurtry et al.	08/20/1991
	A98	5,038,089		Szakaly	08/06/1991
	A99	5,035,242		Franklin et al.	07/30/1991
	A100	5,022,407		Horch et al.	06/11/1991
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	A103	4,982,504		Soderberg et al.	01/08/1991
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	A110	4,930,770		Baker	06/05/1990
	A111	4,907,973		Hon	03/13/1990
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	A119	4,803,413		Kendig et al.	02/07/1989
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	A121	4,794,392		Selinko	12/27/1988
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	A128	4,679,331		Koontz	07/14/1987
	A129	4,676,002		Slocum	06/30/1987
	A130	4,638,798		Shelden et al.	01/27/1987
	A131	4,632,341		Repperger et al.	12/30/1986
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	A133	4,599,070		Hladky et al.	07/08/1986
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	A140	4,398,889		Lam et al.	08/16/1983
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	A144	4,160,508		Salisbury, Jr.	07/10/1979
	A145	4,148,014		Burson	04/03/1979
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	A147	3,944,798		Eaton	03/16/1976
	A148	3,919,691		Noll	11/11/1975

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U.S. PATENT DOCUMENTS					
10	A149	3,911,416		Feder	10/07/1975
	A150	3,903,614		Diamond et al.	09/09/1975
	A151	3,902,687		Hightower	09/02/1975
	A152	3,890,958		Fister et al.	06/24/1975
	A153	3,875,488		Crocker et al.	04/01/1975
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	A155	3,623,064		Kagan	11/23/1971
	A156	3,517,446		Corlyon et al.	06/30/1970
	A157	3,497,668		Hirsch	02/24/1970
	A158	3,490,059		Paulsen et al.	01/13/1970
	A159	3,220,121		Cutler	11/30/1965
	A160	3,157,853		Hirsch	11/17/1964
	A161	2,906,179		Bower	09/29/1959

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Examiner Initials*	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Office ¹	Number ²		
10	B1	0 349 086	A1	Stork Kwant B.V.	01/03/1990
	B2	2 254 911	A		10/21/1992
	B3	WO95/02233			01/19/1995
	B4	WO95/02801			01/26/1995
	B5	WO95/10080			04/13/1995
	B6	WO95/20787			08/03/1995
	B7	WO95/20788			08/03/1997
	B8	WO95/32459			03/11/1995
	B9	WO96/16397			05/30/1996
	B10	WO96/22591			07/25/1996
	B11	4-34610			02/05/1992
	B12	WO94/26167			11/24/1994
	B13	WO96/39944			12/19/1996
	B14	WO94/00052			01/06/1994

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Examiner Signature	Kat Fen	Date Considered	13/19/05
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Substitute for form 1449A/PTO				<i>Complete if Known</i>	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	Unassigned 10/1997, 155
Sheet	5	of	8	Filing Date	Herewith 3/11/04
				First Named Inventor	JoeBen BEVIRT
				Group Art Unit	Unassigned 3711
				Examiner Name	Unassigned Fornstrom
				Attorney Docket Number	IMMR-081/02US

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T ²
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Examiner Signature	<i>Kit Fet</i>	Date Considered	12/19/05
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				Filing Date	Herewith 3/11/04
				First Named Inventor	JoeBen BEVIRT
				Group Art Unit	Unassigned 371
				Examiner Name	Unassigned Feristar
Sheet	6	of	8	Attorney Docket Number	IMMR-081/02US

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Examiner Signature	<i>Pat Let</i>	Date Considered	12/19/05
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				Filing Date	Herewith 3/16/04
				First Named Inventor	Joe Bea BEVIRT
				Group Art Unit	Unassigned 2711
				Examiner Name	Unassigned Fernstrom
Sheet	7	of	8	Attorney Docket Number	IMMR-081/02US

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				Examiner Name	Unassigned Fernstrom
Sheet	8	of	8	Attorney Docket Number	DMMR-081/02US

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¹ Unique citation designation number.
² Applicant is to place a check mark here if English language Translation attached.

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